

Appl. No. 10/605,833
Amdt. dated October 12, 2005
Reply to Office action of July 13, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

- 1 (currently amended): A nitride light-emitting device having an adhesive reflecting layer
- 5 comprising:
- a metal reflecting layer having an upper surface and a lower surface;
 - a first reaction layer formed over the upper surface of the metal reflecting layer;
 - a transparent adhesive layer formed over the first reaction layer;
 - a second reaction layer formed over the transparent adhesive layer;

10 a nitride light-emitting stack layer formed over the second reaction layer, the
nitride light-emitting stack layer comprising a first surface and a
second surface;

 - a first electrode formed over the first surface; and
 - a second electrode formed over the second surface;

15 wherein each of the first and second reaction layers is formed to enhance an
adhesion provided by the transparent adhesive layer.

2 (original): The nitride light-emitting device of claim 1 wherein the nitride light-emitting
stack layer comprises a nitride first contact layer, the nitride first contact layer

20 comprising a first surface and a second surface; a nitride first cladding
layer formed over the first surface; a nitride light-emitting layer formed over the
nitride first cladding layer; a nitride second cladding layer formed over the nitride
light-emitting layer; and a nitride second contact layer formed over the nitride
second cladding layer.

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3 (original): The nitride light-emitting device of claim 2 wherein the first electrode is

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formed over the second surface and the second electrode is formed over the nitride second contact layer.

4 (original): The nitride light-emitting device of claim 1 further comprising a first
5 substrate formed over the lower surface of the metal reflecting layer.

5 (original): The nitride light-emitting device of claim 4 further comprising a metal heat sink formed over a lower surface of the first substrate.

10 6 (original): The nitride light-emitting device of claim 1 further comprising a metal heat sink formed over a lower surface of the metal reflecting layer.

7 (original): The nitride light-emitting device of claim 1 further comprising a second
15 substrate formed between the second reaction layer and the light-emitting stack layer.

8 (original): The nitride light-emitting device of claim 1 further comprising a transparent
20 conductive layer formed between the second reaction layer and the light-emitting stack layer.

9 (currently amended): The nitride light-emitting device of claim 8 wherein the
transparent conductive layer ~~comprising~~ comprises a first surface and a
second surface; the first electrode is formed over the first surface; the
light-emitting stack layer is formed over the second surface; and the second
25 electrode is formed over the light-emitting stack layer.

10 (currently amended): The nitride light-emitting device of claim 1 wherein the metal reflecting layer comprises at least one material selected from a material group

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consisting of In, Sn, Al, Au, Pt, Zn, Ag, Pb, Pd, Ge, Cu, AuBe, AuGe, Ni, PbSn,
and AuZn, ~~or other substitute materials.~~

11 (currently amended): The nitride light-emitting device of claim 1 wherein the first
5 reaction layer comprises at least one material selected from a material group
consisting of SiNx, Ti, and Cr, ~~or other substitute materials.~~

12 (currently amended): The nitride light-emitting device of claim 1 wherein the
transparent adhesive layer comprises at least one material selected from a material
10 group consisting of PI, BCB, and PFCB, ~~or other substitute materials.~~

13 (currently amended): The nitride light-emitting device of claim 1 wherein the second
reaction layer comprises at least one material selected from a material group
consisting of SiNx, Ti, and Cr, ~~or other substitute materials.~~

14 (currently amended): The nitride light-emitting device of claim 2 wherein the nitride
first contact layer comprises at least one material selected from a material group
consisting of GaN, InGaN, and AlGaN, ~~or other substitute materials.~~

15 (currently amended): The nitride light-emitting device of claim 2 wherein the nitride
first cladding layer comprises at least one material selected from a material group
consisting of AlN, GaN, AlGaN, InGaN, and AlInGaN, ~~or other substitute materials.~~

16 (currently amended): The nitride light-emitting device of claim 2 wherein the nitride
25 light-emitting layer comprises at least one material selected from a material group
consisting of GaN, InGaN, and AlInGaN, ~~or other substitute materials.~~

17 (currently amended): The nitride light-emitting device of claim 2 wherein the nitride

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second cladding layer comprises at least one material selected from a material group consisting of AlInGa_N, GaN, AlGa_N, InGa_N, and AlInGa_N, ~~or other substitute materials.~~

5 18 (currently amended): The nitride light-emitting device of claim 2 wherein the nitride second contact layer comprises at least one material selected from a material group consisting of GaN, InGa_N, and AlGa_N, ~~or other substitute materials.~~

10 19 (currently amended): The nitride light-emitting device of claim 4 wherein the first substrate comprises at least one material selected from a material group consisting of silicon, GaAs, glass, quartz, GaP, GaAsP, AlGaAs, and metal, ~~or other substitute materials.~~

15 20 (currently amended): The nitride light-emitting device of claim 6 wherein the metal heat sink comprises at least one material selected from a material group consisting of Sn, Al, Au, Pt, Zn, Ag, Pb, Pd, Ge, Cu, AuBe, AuGe, Ni, PbSn, and AuZn, ~~or other substitute materials.~~

20 21 (currently amended): The nitride light-emitting device of claim 7 wherein the second substrate comprises at least one material selected from a material group consisting of Al₂O₃, SiC, ZnO, and GaN, ~~or other substitute materials.~~

25 22 (original): The nitride light-emitting device of claim 8 wherein the transparent conductive layer comprises at least one material selected from a material group consisting of indium tin oxide, cadmium tin oxide, antimony tin oxide, zinc oxide, and zinc tin oxide.

23 (new): The nitride light-emitting device of claim 13 wherein the transparent adhesive

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layer comprises at least one material selected from a material group consisting of PI, BCB, and PFCB.

24 (new): The nitride light-emitting device of claim 12 wherein the first reaction layer
5 comprises SiNx or Cr.

25 (new): The nitride light-emitting device of claim 11 wherein the transparent adhesive
layer comprises PFCB.

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